

Newbie question: Compiling ESMF ...

This thread is locked

[gederer](#) 6 posts since

Jul 22, 2008 Hi,

This question is somewhat off topic. I'm hoping that the remedy to my problem will be obvious to someone around here.

I am attempting to install ESMF 2.2.2rp3 so that I can run LIS. I am new to LIS, new to ESMF and new to Fortran.

The output of 'gmake info' is:

Make version:

GNU Make 3.81

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This program built for x86_64-redhat-linux-gnu

Fortran Compiler version:

mpif90 for 1.0.7

Absoft 64-bit Fortran 95 10.1.2

ERROR: No input files.

C++ Compiler version:

mpicxx for 1.0.7

c++ (GCC) 4.1.2 20071124 (Red Hat 4.1.2-42)

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ESMF_VERSION_STRING "2.2.2rp3"

- ESMF environment variables *

ESMF_DIR: /home/greg/tmp/esmf/esmf

ESMF_OS: Linux

ESMF_MACHINE: x86_64

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```
ESMF_ABI: 64
ESMF_COMPILER: absoft
ESMF_BOPT: O
ESMF_COMM: mpich2
ESMF_SITE: default
ESMF_EXHAUSTIVE: OFF
ESMF_PTHREADS: ON
ESMF_TESTWITHTHREADS: OFF
ESMF_NO_IOCODE: TRUE
ESMF_ARRAY_LITE: FALSE
ESMF_NO_INTEGER_1_BYTE: FALSE
ESMF_NO_INTEGER_2_BYTE: FALSE
```

-
- ESMF environment variables pointing to 3rd party software *

-
- ESMF environment variables for final installation *

```
ESMF_INSTALL_PREFIX: /opt/esmf
ESMF_INSTALL_HEADERDIR: include
ESMF_INSTALL_MODDIR: mod/modO/Linux.absoft.64.mpich2.default
ESMF_INSTALL_LIBDIR: lib/libO/Linux.absoft.64.mpich2.default
ESMF_INSTALL_DOCDIR: doc
```

-
- Compilers, Linkers, Flags, and Libraries *

Location of the preprocessor: /usr/bin/gcc

Location of the Fortran compiler: /usr/local/bin/mpif90

Location of the Fortran linker: /usr/local/bin/mpif90

Location of the C++ compiler: /usr/local/bin/mpicxx

Location of the C++ linker: /usr/local/bin/mpicxx

Fortran compiler flags:

```
ESMF_F90COMPILEOPTS: -O -YEXT_NAMES=LCS -YEXT_SFX=_
ESMF_F90COMPILEPATHS:
-p/home/greg/tmp/esmf/esmf/mod/modO/Linux.absoft.64.mpich2.default
-l/home/greg/tmp/esmf/esmf/src/include
ESMF_F90COMPILECPPFLAGS: -DESMF_NO_IOCODE -DS64=1
```

Fortran linker flags:

```
ESMF_F90LINKOPTS:
```

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ESMF_F90LINKPATHS:

-L/home/greg/tmp/esmf/esmf/lib/libO/Linux.absoft.64.mpich2.default

ESMF_F90LINKRPATHS:

-WI,-rpath,/home/greg/tmp/esmf/esmf/lib/libO/Linux.absoft.64.mpich2.default

ESMF_F90LINKLIBS: -lrt -lstdc++

ESMF_F90ESMFLINKLIBS: -lesmf -lrt -lstdc++

C++ compiler flags:

ESMF_CXXCOMPILEOPTS: -O

ESMF_CXXCOMPILEPATHS: -I/home/greg/tmp/esmf/esmf/src/include

ESMF_CXXCOMPILECPPFLAGS: -DESMF_NO_IOCODE -DS64=1 -D__SDIR__=

C++ linker flags:

ESMF_CXXLINKOPTS:

ESMF_CXXLINKPATHS:

-L/home/greg/tmp/esmf/esmf/lib/libO/Linux.absoft.64.mpich2.default

-LANG:=f90 -L/opt/absoft10.1/lib64

ESMF_CXXLINKRPATHS:

-WI,-rpath,/home/greg/tmp/esmf/esmf/lib/libO/Linux.absoft.64.mpich2.default

-WI,-rpath,ANG:=f90 -WI,-rpath,/opt/absoft10.1/lib64

ESMF_CXXLINKLIBS: -lrt -laf90math -lafio -lamisc -labsoftmain

-laf77math -lm -lrv

ESMF_CXXESMFLINKLIBS: -lesmf -lrt -laf90math -lafio -lamisc

-labsoftmain -laf77math -lm -lrv

Compiling on Thu Jul 17 10:33:36 PDT 2008 on zippy.geog.ucsb.edu

Machine characteristics: Linux zippy.geog.ucsb.edu 2.6.18-92.el5xen #1

SMP Tue Apr 29 13:31:30 EDT 2008 x86_64 x86_64 x86_64 GNU/Linux

And, here is the error output from gmake:

```
mpif90 -c -O -YEXT_NAMES=LCS -YEXT_SFX=_  
-I/home/greg/tmp/esmf/esmf/build_config/Linux.absoft.default  
-P/home/greg/tmp/esmf/esmf/mod/modO/Linux.absoft.64.mpich2.default  
-I/home/greg/tmp/esmf/esmf/src/include -DESMF_NO_IOCODE -DS64=1  
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90  
  
module ESMF_LogErrMod  
^  
cf90-855 af90fe64: ERROR ESMF_LOGERRMOD, File =  
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
```

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Line = 14, Column = 14

The compiler has detected errors in module "ESMF_LOGERRMOD". No module information file will be created for this module.

CLOSE(UNIT=log%unitNumber)

^

cf90-303 af90fe64: ERROR esmf_logclose, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,

Line = 267, Column = 21

Data type type(esmf_logtype) is not allowed with type(esmf_logtype)
for the operation "NE.".

endif

^

cf90-303 af90fe64: ERROR esmf_logclose, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,

Line = 270, Column = 21

Data type type(esmf_logical) is not allowed with type(esmf_logical)
for the operation "EQ.".

if ((alog%FileIsOpen .eq. ESMF_TRUE) .AND. &

^

cf90-303 af90fe64: ERROR esmf_logflush, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,

Line = 351, Column = 25

Data type type(esmf_logical) is not allowed with type(esmf_logical)
for the operation "NE.".

if (alog%LOG_ENTRY(j)%methodflag) then

^

cf90-303 af90fe64: ERROR esmf_logflush, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,

Line = 356, Column = 26

Data type type(esmf_logical) is not allowed with type(esmf_logical)
for the operation "EQ.".

WRITE(alog%unitNumber,122) &

^

cf90-303 af90fe64: ERROR esmf_logflush, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
Line = 357, Column = 23

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Data type type(esmf_logical) is not allowed with type(esmf_logical)
for the operation "EQ.".

alog%LOG_ENTRY(j)%d, " ", &

^

cf90-303 af90fe64: ERROR esmf_logflush, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
Line = 358, Column = 14

Data type type(esmf_logical) is not allowed with type(esmf_logical)
for the operation "EQ.".

^

cf90-303 af90fe64: ERROR esmf_logopen, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
Line = 952, Column = 24

Data type type(esmf_logical) is not allowed with type(esmf_logical)
for the operation "EQ.".

if (log%petNumber .le. 9) then

^

cf90-303 af90fe64: ERROR esmf_logopen, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
Line = 981, Column = 18

Data type type(esmf_logtype) is not allowed with type(esmf_logtype)
for the operation "NE.".

else if (log%petNumber .le. 99) then

^

cf90-303 af90fe64: ERROR esmf_logopen, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
Line = 983, Column = 21

Data type type(esmf_logtype) is not allowed with type(esmf_logtype)
for the operation "EQ.".

endif

^

cf90-303 af90fe64: ERROR esmf_logopen, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
Line = 1043, Column = 24

Data type type(esmf_logical) is not allowed with type(esmf_logical)
for the operation "NE.".

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```
if (present(verbose)) then
^

cf90-303 af90fe64: ERROR esmf_logset, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
Line = 1139, Column = 25
Data type type(esmf_logical) is not allowed with type(esmf_logical)
for the operation "NE.".

return
^

cf90-303 af90fe64: ERROR esmf_logwrite, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
Line = 1253, Column = 22
Data type type(esmf_logtype) is not allowed with type(esmf_logtype)
for the operation "NE.".

^

cf90-303 af90fe64: ERROR esmf_logwrite, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
Line = 1255, Column = 29
Data type type(esmf_logical) is not allowed with type(esmf_logical)
for the operation "NE.".

alog%stopprogram=.TRUE.
^

cf90-303 af90fe64: ERROR esmf_logwrite, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
Line = 1302, Column = 32
Data type type(esmf_halttype) is not allowed with type(esmf_halttype)
for the operation "EQ.".

^

cf90-303 af90fe64: ERROR esmf_logwrite, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
Line = 1302, Column = 71
Data type type(esmf_msctype) is not allowed with type(esmf_msctype)
for the operation "EQ.".

alog%flushImmediately .eq. ESMF_TRUE) then
^

cf90-303 af90fe64: ERROR esmf_logwrite, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
```

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Line = 1306, Column = 21

Data type type(esmf_halttype) is not allowed with type(esmf_halttype)
for the operation "EQ.".

^

cf90-303 af90fe64: ERROR esmf_logwrite, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
Line = 1306, Column = 62

Data type type(esmf_msctype) is not allowed with type(esmf_msctype)
for the operation "GT.".

alog%flIndex = alog%flIndex + 1

^

cf90-303 af90fe64: ERROR esmf_logwrite, File =
/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src/ESMF_LogErr.F90,
Line = 1311, Column = 35

Data type type(esmf_logical) is not allowed with type(esmf_logical)
for the operation "EQ.".

f90: Copyright Absoft Corporation 1994-2007; Absoft Fortran Compiler

Version 10.1

f90fe: 1702 source lines

f90fe: 19 Errors, 0 Warnings, 0 Other messages, 0 ANSI

f90fe failed.

gmake[7]: ***

[/home/greg/tmp/esmf/esmf/lib/libO/Linux.absoft.64.mpich2.default/libesmf.a(ESMF_LogErr.o)]

Error 1

gmake[7]: Leaving directory

`/home/greg/tmp/esmf/esmf/mod/modO/Linux.absoft.64.mpich2.default'

gmake[6]: *** [esmflib] Error 2

gmake[6]: Leaving directory

`/home/greg/tmp/esmf/esmf/mod/modO/Linux.absoft.64.mpich2.default'

gmake[5]: *** [tree_lib] Error 2

gmake[5]: Leaving directory

`/home/greg/tmp/esmf/esmf/src/Infrastructure/Util/src'

gmake[4]: *** [tree] Error 1

gmake[4]: Leaving directory

`/home/greg/tmp/esmf/esmf/src/Infrastructure/Util'

gmake[3]: *** [tree] Error 1

gmake[3]: Leaving directory `/home/greg/tmp/esmf/esmf/src/Infrastructure'

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```
gmake[2]: *** [tree] Error 1  
gmake[2]: Leaving directory `/home/greg/tmp/esmf/esmf/src'  
gmake[1]: *** [tree] Error 1  
gmake[1]: Leaving directory `/home/greg/tmp/esmf/esmf'  
gmake: *** [build_libs] Error 2
```

Any suggestions greatly appreciated.

Thanks!

Greg Tags: esmf, compile, lis

[sujay](#) 118 posts since

Sep 20, 2007 [1. Re: Newbie question: Compiling ESMF](#) Jul 23, 2008 2:18 PM

Hi Greg,

I noticed that you are trying to compile esmf with mpich2. Is that correct?

LIS does not use mpich2 so you may want to try compiling with mpich.

Set the ESMF_COMM flag to mpich and try again.

-Sujay

[gederer](#) 6 posts since

Jul 22, 2008 [2. Re: Newbie question: Compiling ESMF](#) Jul 23, 2008 5:54 PM

in response to: [sujay](#) Hi Sujay,

I understand that MPICH-2 is a superset of MPICH-1. Do I need to install MPICH-1 (which, I believe, is no longer supported), or can I use my existing MPICH-2 install with ESMF_COMM=mpich?

Thanks!

Greg

[sujay](#) 118 posts since

Sep 20, 2007 [3. Re: Newbie question: Compiling ESMF](#) Jul 24, 2008 9:56 AM

in response to: [gederer](#) Greg,

I am not sure if this is the problem. From your log, I don't understand enough to figure this out. You really need to contact the ESMF team.

-S

[gederer](#) 6 posts since

Jul 22, 2008 [4. Re: Newbie question: Compiling ESMF](#) Jul 24, 2008 3:40 PM

in response to: [sujay](#)

Newbie question: Compiling ESMF ...

Hi Sujay,

I am now in contact with the ESMF support team. Thanks very much for your suggestions.

Cheers,

Greg